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NPS MPTE- Related Student Theses for Period January- March 2017

Attrition

***Critical Mass: Is Female Marine Attrition Higher in Non-Traditional Military Occupational Specialties?* Delus, Charlyne**

Despite the many restrictions women in the Marine Corps have had to endure and overcome, every year, thousands of women make the conscious decision to serve; however, they make the decision to leave at a high rate as well. This thesis uses data from Manpower and Reserve Affairs (M&RA) of all personnel who joined the Marine Corps from 2000–2014 and, specifically, it evaluates whether critical mass of female Marines in a particular Military Occupational Specialty (MOS) has an effect on attrition.

<http://hdl.handle.net/10945/52970>

***Leveraging Non-Cognitive Testing to Predict Success at USMC Scout Sniper Course*, Jaunal, Gregory R.**

We develop statistical models to determine the most significant characteristics contributing to success at scout sniper school. We use data from 2012 through 2016 containing more than 700 Marines from every infantry military occupational specialty (MOS) to build multivariate probit models to determine which observable traits best predict success. In addition, we analyze 48 students' responses to the Grit Scale and a Big Five personality questionnaire to identify the most influential noncognitive traits that lead to successfully completing the course. We discover that significant relationships exist between military performance and graduation.

<http://hdl.handle.net/10945/52994>

***Immigrants in the U.S. Navy: Present, Past and Future*, Guerrero, Estevez**

The research compares first-term enlisted Navy attrition rates of people with different immigration/citizenship statuses. The results of the statistical analysis suggest that noncitizens have a significantly lower attrition rate compared with U.S. citizens, followed by immigrants from U.S. territories. According to the interview responses, it appears that noncitizens are motivated to join the Navy for better education and career opportunities provided to them and their families. The author concludes that noncitizens and immigrants are a valuable resource to the Navy and recommends policy makers find incentives to increase recruiting among these groups. The author also recommends areas of further research that study the resiliency of noncitizens compared to citizens, and study those who migrate from U.S. territories.

<http://hdl.handle.net/10945/52979>

Career Management

*****K-12 Schools: The Effect of Public School Choices on Marine families' Co-Location Decisions, Velding, Tamara J.***

This thesis examines geographic bachelorhood among Marines assigned to various bases and the role of school quality on the decision to pursue geographic bachelorhood. In particular, it estimates the effect of having school-age children on the probability of geographic bachelorhood when Marines are assigned to Jacksonville, North Carolina; Albany, Georgia; Twentynine Palms, California; and Hawaii—areas perceived as having under-performing K-12 schools. The thesis further analyzes the effects of having school-age children on whether Marines establish households within the school district boundaries of these locations.

I find that Marines with school-age children exhibit higher odds of choosing to be geographic bachelors in all locations studied; however, Marines with school-age children assigned to Albany exhibit the greatest odds of choosing geographic bachelorhood.

<http://hdl.handle.net/10945/52948>

Disruptive Behaviors

*****Risk Factors for Sexual Violence in the Military: An Analysis of Sexual Assault and Sexual Harassment Incidents and Reporting, Souder, William C.***

This thesis studies the effects of demographics, prior victimization, deployment status, and workplace characteristics—specifically, command climate, leadership and training quality—on both incidence and reporting of sexual assault and sexual harassment. Analysis of survey respondents is done separately for men and women. In both male and female subjects, there is a strong correlation between outcome variables and the following factors: deployment status, ineffective leadership, and a problematic workplace environment.

<http://hdl.handle.net/10945/53051>

Education

Comparative Research of Navy Voluntary Education at Operational Commands, Veenhuis, Christopher B.

This research analyzes the enrollment growth of the Tuition Assistance (TA) program and the continued decline in enrollment within the Navy College Program for Afloat College Education (NCPACE). The conclusion of this research provides insights on the current and future dynamic involved with VOLED in

the Navy and is contrary to the accepted perceptions of traditional educational paradigms and the types of learner the system intends to attract.

<http://hdl.handle.net/10945/52947>

Knowledge Management

Lessons Learned from the Development and Implementation of a Knowledge Management Program for the Naval Sea Systems Command, Carroll, Rachel

Lessons learned throughout this study were applied to shaping the KM program into a diverse set of communication tools that have improved the knowledge base and employee engagement with respect to engineering and technical authority concepts across the NAVSEA enterprise. Although the focal organization supports a military mission, the fundamental elements of this KM program can be replicated and tailored to suit the needs of any organization.

<http://hdl.handle.net/10945/52960>

Officer Quality

*****Exploring Marine Corps Officer Quality: An Analysis of Promotion to Lieutenant Colonel, Stolzenberg, Matthew***

This thesis analyzes five years of USMC lieutenant colonel (LtCol) promotion board data to identify career factors that predict promotion to LtCol. Multivariate regression models are used in this thesis to assess the effects of FITREP scores, specific FITREP attribute scores, and career performance factors on the probability of promotion to LtCol. The results suggest that both subjective scores on officer FITREPs as well as objective measures of performance, such as awards and career accomplishments, are important in predicting promotion and tend to be complementary in capturing Marine quality. The findings also show that different factors predict LtCol selection across military occupational specialties (MOS), indicating a potential influence of MOS-specific subcultures on evaluations. Based on these findings, the study presents policy recommendations as well as suggestions for future research on quality of Marine Corps personnel.

<http://hdl.handle.net/10945/53053>

Quantitative Analysis of High-Quality Officer Selection by Commandant's Career-Level Education Board, Rateike, Clifton

In our research, we identify characteristics and attributes valued by the Marine Corps when selecting high-quality company-grade officers. Selection on Commandant's Career-Level Education Board (CCLEB) serves as a proxy for high quality. Our research finds that factors relating to job experience and job performance are valued more highly than variables associated with training or early career attributes of Marines during the CCLEB selection process. The Basic School (TBS) scores, specifically the academic and

leadership portions, are an accurate earlier predictor of both performance and selection. The findings in this study provide support in the effort of identifying and measuring the quality of Marine Corps officers.

<http://hdl.handle.net/10945/53036>

Performance Management

*****Effectiveness of the Marine Corps' Junior Enlisted Performance Evaluation System: An Evaluation of Proficiency and Conduct Marks, Larger, Richard B***

This thesis analyzes the effectiveness of the U.S. Marine Corps' proficiency and conduct marks as measures of job performance for promotion decisions. Overall, results show that proficiency and conduct marks are effective indicators of performance, with some room for improvement. Marks are statistically inconsistent between raters, and proficiency and conduct marks essentially measure the same type of performance. The factor analysis does show that proficiency and conduct marks together are the most important factors in the composite score for E4s and the second most important, behind experience, for E3s. Lastly, proficiency and conduct marks are the most predictive of future performance compared to all other composite score variables.

<http://hdl.handle.net/10945/53006>

Recruiting

Improving Navy Recruiting with the New Planned Resource Optimization Model with Experimental Design (PROM-WED). Hogarth, Alison

The Navy has historically used a non-linear optimization model, the Planned Resource Optimization (PRO) model, to help inform decisions on the allocation of those recruiting resources. Input variables to the PRO model include economic influences and policy factors. The result is a recommended allocation of resources for advertisements, recruiters, enlistment bonuses, and education incentives.

This paper describes the Planned Resource Optimization Model with Experimental Design (PROM-WED), a tool that alleviates the limitations and enhances the analytic utility of the legacy PRO model. PROM-WED embeds the legacy PRO model within a data farming environment. PROM-WED's graphical user interface and decision support capability provide decision makers with robust insights into variable interactions and uncertainties to better inform their recruiting resourcing decisions.

<http://hdl.handle.net/10945/52992>

Marijuana and the U.S. Navy: The Impact of Changing Laws, Attitudes and Behavior on Recruiting, Martinez Alvarez, Katherine G

As marijuana becomes more popular, the Navy faces a recruiting challenge. This thesis analyzes the generational shift of perception toward marijuana legalization and the impact of legalization on military accessions and marijuana waivers granted in the U.S. Navy.

I find that state marijuana legalization leads to a decrease of 0.2 waivers granted per month in the most robust model (i.e., when comparing states that have legalized marijuana to those that have not while controlling for state and time fixed effects). In addition, the estimates suggest legalization increases the total number of recruits by 4.9 per month in a similar framework. Both of these results were statistically significant at the standard 5 percent level.

<http://hdl.handle.net/10945/53016>

The Potential Effects of Minimum Wage Changes on Naval Accessions, Blake, Robert; Ekundayo, Adesina

This MBA report demonstrates that raising the minimum wage could have a positive effect on the military's ability to recruit personnel because an increased minimum wage will increase the number of prospective recruits. This report examines how the minimum wage originated from the Federal Labor Standards Act of 1938 and morphed into what it is today. Then it examines how a price floor affects the market's demand for labor and utilizes the two-sector and search models to demonstrate how the minimum wage market correlates to military accessions.

<http://hdl.handle.net/10945/52942>

Evaluating the Navy's Enlisted Accessions Testing Program Based on Future Talent Needs, Riley, Shereka

This thesis conducts a gap analysis to gauge the applicability of the Navy's current accessions testing measures to its future recruiting needs. We found that the Navy is inadequately assessing applicant skills and attributes through its primary use of cognitive testing. Personality traits or non-cognitive traits testing may be used to help the Navy identify the appropriate recruits to compose high-performance teams, particularly in the enlisted ranks. Additionally, personality traits testing may be used for Navy officer accessions to help improve the quality of leaders.

<http://hdl.handle.net/10945/53037>

Resilience

Resilience Among Students at the Basic Enlisted Submarine School, Trivette, AliceMary; Raigoza, Dominic; Gonzales, Melissa

This study assesses resilience among Sailors at Basic Enlisted Submarine School (BESS), analyzing the effects of positive framing and how changes in resilience affect subjective well-being and perceived stress. An appreciative inquiry-based intervention was administered at two intervals to measure changes according to various scales (e.g., positive framing, perceived-stress scale, resilience, and subjective well-being). Findings suggest that the encouragement of social resilience helps buffer against stress and explains subjective well-being. Improvement of Sailor resilience may improve fleet readiness, productivity, retention, and morale. It is recommended that this study be expanded in scope from BESS to the entire submarine fleet to target and reduce unplanned attrition in the submarine community.

<http://hdl.handle.net/10945/51629>

An Exploration of Cognitive Agility as Quantified by Attention Allocation in a Complex Environment, Mariscal, Mirium

This thesis supports the Army's mission to establish a measure for cognitive agility in soldiers. It examines attention-allocation patterns as quantified by eye-tracking data collected while subjects played a military-relevant cognitive agility computer game (Make Goal), to determine whether certain patterns are associated with effective performance. It also investigates the effects of stress on cognitive agility as measured by attention allocation.

<http://hdl.handle.net/10945/53014>

Retention

The Performance and Retention of Female Navy Officers with a Military Spouse? Wagner, Stefan

With the number of dual-military couples on the rise, and with women more likely than men to be married to a service member, this study examines retention and performance of female Navy officers in a dual-military marriage. These findings suggest that the Navy needs to address work-life balance to increase retention rates of female Navy officers in a dual-military marriage, and subsequently benefit from their higher performance later.

<http://hdl.handle.net/10945/52950>

Identifying and Retaining Quality Naval Officers: A Quantitative Analysis of Job Matching and Lateral Transfers, Vellucci, Giuliana

This study examines job performance measures among Navy officers on their initial job assignment and among officers who completed a lateral transfer and redesignation. The findings suggest that officers who lateral transfer have higher retention and promotion rates than other officers. When the analysis is conducted by community, the findings show mixed retention and promotion effects. Performance is further examined via fitness reports scores, showing lower individual trait averages for males who lateral transferred into the Unrestricted Line communities, and higher trait averages for females who lateral transferred into Restricted Line/Staff communities.

<http://hdl.handle.net/10945/52949>

Exploring How Age, Accession Source, Childbearing and the SWO Career Path influence Female SWO Retention, Vance, Audra M

This study explores the factors of age and accession source in conjunction with women's primary childbearing years to determine how the timing of the Surface Warfare Officer (SWO) career tracks influence retention decisions of women in the SWO community. The study draws on technical reports and academic literature to address economic and psychological factors in conjunction with prior graduate theses on female SWO retention. This framework establishes career path timelines and

introduces an Optimum Childbearing Window (OCW), from ages 25 to 30, aligning childbearing years with the four SWO career tracks based on accession source groupings.

<http://hdl.handle.net/10945/52946>

Designing a Better Navy Aviation Retention Bonus, Simerman, Peter A

In this paper, I propose a menu-of-contracts system whereby aviators can choose between a plan that offers guaranteed payouts at a medium rate or a plan that offers low payouts initially and then high payouts when certain performance milestones are met. This will induce aviators to self-select according to their own ability levels and effectively targets high performers with high bonus levels while maintaining a sense of fairness due to the personal choice.

<http://hdl.handle.net/10945/53048>

The Challenges to Gender Integration in the Career Fire Services: A Comparative Case Study of Men in Nursing, Schermerhorn-Collins, Anna L.

This thesis explores the challenges to gender integration in career fire services by conducting a comparative case study of men in nursing. This thesis uses the subcategories of entitlement, belonging, pride, indoctrination, and tradition to analyze the challenges to gender integration in the workplace. It starts with an overview of fire service culture. This overview is followed by a detailed analysis of women in fire service and men in nursing. Finally, the thesis compares the elements within each subcategory to identify the impact of various impediments to promoting recruitment and retention in gendered workspaces.

<http://hdl.handle.net/10945/53044>

*****Life-Work Balance and the Effects on Retention in the Navy Nurse Corps. Rodriguez, Rebeca***

This study explores life-work balance in the Navy Nurse Corps (NC). Qualitative and quantitative analysis of 636 survey responses showed that current satisfaction with life-work balance is low in the NC. Uniformity of responses offers strong support for widespread change throughout the NC. In the interest of retention continuity across rank and sub-specialty code key recommendations include exploring flexibility in self-scheduling, career path, and assignment length. Usable data and respondent opinions offer NC leadership insight into vital policy discussions related to increasing both job satisfaction and retention within the NC. This study provides the framework for larger discussions concerning the achievement of life-work balance across other designators in the United States Navy.

<http://hdl.handle.net/10945/53039>

Retirement Reform

Analysis of the Effectiveness of the Retire Tool when Deciding Between HIGH-36 Retirement and Blended TSP Retirement, Gilreath, Nathan

The purpose of this research was to evaluate the effectiveness of a previously developed retirement tool (RETIRE Tool) that allows service members to evaluate and compare the net present values (NPV) of the HIGH-36 retirement system (HIGH-36) and the blended Thrift Savings Plan retirement system (BRS) in order to make an informed retirement decision. The effectiveness of the RETIRE Tool was assessed through a before-and-after survey of military personnel at the Naval Postgraduate School. Service members who have less than 12 years of active service by December 31, 2017 can opt into the BRS between January 1, 2018 and December 31, 2018. The RETIRE Tool provides financial value estimates of the old retirement system compared to the new retirement system.

<http://hdl.handle.net/10945/51702>

Training

An Analysis of the Navy Manpower, Personnel, Training and Education Architecture, Kolpak, Ronald F III

This thesis examines the systems that make up the Manpower, Personnel, Training and Education (MPT&E) process in the United States Navy. The study identifies existing MPT&E system flows of input, throughput, output and outcomes, seeking opportunities to improve MPT&E training and education.

<http://hdl.handle.net/10945/53002>

Workforce Cost Management

Street to Navy Enlisted Sailor Costing, Bell, Huizinga, Neesmith, Wilson

Street to Navy Enlisted Sailor Costing is a project to identify and analyze current total costs associated with the process of recruitment, entrance processing, and recruit training for transforming a civilian prospect into an enlisted Navy Sailor. The team identified the individual process within each organization, and then created a swimlane to track an individual through the process. The team identified comprehensive Navy cost activities at NAVCRUITCOM, USMEPCOM, and RTC, and then identified the fixed and variable costs to provide an estimated average cost per Sailor. The team analyzed the transformation process through the prospecting, applicant, and recruit phases.

<http://hdl.handle.net/10945/51647>

The Use of Reverse Auction Within the U.S. Army, Saal, Amy, Settembre, Steven

This project examines the use of RAs within the Army Contracting Command (ACC) using E. Cory Yoder's Three Integrative Pillars for Success. Research questions focus on identifying best practices currently used within the contracting field. Data gathered through personal interviews with subject matter experts and practitioners of RA tools identifies whether current RA platforms deliver best value procurements and generate true cost savings. Interview questions target three key focus areas: personnel, platforms, and protocols. If the ACC is to utilize RAs in the most effective and efficient manner, it is essential to select the appropriate RA type, field the best platform, and implement the correct protocols to maximize the use of RAs. These three factors together will yield maximum savings

while generating new process improvements that will enable the ACC to become a more efficient and lean organization.

<http://hdl.handle.net/10945/51608>